

- 4.(Currently Amended) The method according to claim ~~1 or 2~~ 29, in which focusing involves a movement of the ~~at least one~~ particle in a part of the fluid flow in whose perpendicular projection onto a wall of the compartment the impedance detector is arranged.
- 5.(Currently Amended) The method according to claim 29 ~~any one of the preceding~~ ~~claims~~, in which focusing involves a movement of the ~~at least one~~ particle such that the perpendicular distance between the particle and the impedance detector is reduced.
- 6.(Currently Amended) The method according to claim 29 ~~any one of the preceding~~ ~~claims~~, in which synthetic or biological particles move past the impedance detector.
- 7.(Currently Amended)The method according to claim 29 ~~any one of the preceding~~ ~~claims~~, in which the ~~at least one~~ impedance value is evaluated in relation to dielectric characteristics of the respective passing particle.
- 8.(Currently Amended) The method according to claim 29 ~~any one of the preceding~~ ~~claims~~, in which a multitude of impedance values is acquired whose time behaviour is evaluated in relation to at least one of the point in time, the direction and~~or~~ the speed of the particle moving past.

- 9.(Original) The method according to claim 8, in which from the time behaviour of the impedance values a flow speed of the fluid is acquired.
- 10.(Currently Amended) The method according to claim 8 ~~or~~ 9, in which the impedance values are acquired with the impedance detector, wherein the respectively detected particles moves past detector electrodes of the impedance detector, wherein the shape of at least one of the detector electrodes changes in a direction parallel to the direction of the flow of the fluid.
- 11.(Currently Amended) The method according to claim 8 ~~any one of claims 8 to 10~~, in which the impedance values are acquired with the impedance detector, wherein the respectively detected particles moves past the detector electrodes of the impedance detector, which detector electrodes are arranged on opposite sides of the compartment and are of various shapes.
- 12.(Currently Amended) The method according to claim 8 ~~any one of claims 8 to 11~~, in which the impedance values are acquired using the impedance detector and at least one further impedance detector which is arranged so as to be spaced apart in the direction of the fluid flow.
- 13.(Currently Amended) The method according to claim 29 ~~any one of the preceding claims~~ in which focusing of the particle, ~~of which there is at least one~~, and measuring of the impedance value, ~~of which there is at least one~~, take place at different frequencies.

14.(Currently Amended) A measuring device for measuring the impedance in a fluidic microsystem, comprising:

- an impedance detector which is arranged in a compartment of the microsystem through which a fluid flows; and
- a focusing device ~~by means of which~~ whereby at least one particle is ~~slidable~~ movable in close proximity to the impedance detector, ~~characterised in that~~  
~~the said~~ focusing device ~~comprises~~ comprising at least two focusing electrodes for exerting dielectrophoretic forces onto the at least one particle wherein the focusing device forms a funnel-shaped field barrier in the compartment.

15.(Original) The measuring device according to claim 14, in which the focusing device is arranged upstream relative to the impedance detector.

16.(Original) The measuring device according to claim 14, in which the impedance detector forms part of the focusing device.

17.(Currently Amended) The measuring device according to ~~any one of claims 14 to 16~~ claim 14, in which at least two pairs of focusing electrodes are provided on opposite walls of the compartment, which electrodes form the funnel-shaped field barrier.

- 18.(Currently Amended) The measuring device according to ~~any one of claims 14 to 17~~  
claim 14, in which the lengths of the focusing electrodes differ in the direction of  
the fluid flow.
- 19.(Currently Amended) The measuring device according to ~~any one of claims 14 to 18~~  
claim 14, in which the impedance detector comprises at least two detector  
electrodes which are arranged on one wall or on various walls of the  
compartment.
- 20.(Original) The measuring device according to claim 19, in which at least one of the  
detector electrodes in a reference direction parallel to the direction of the fluid  
flow is non-uniform in shape or in which both detector electrodes in a reference  
direction parallel to the direction of the fluid flow differ in shape.
- 21.(Currently Amended) The measuring device according to claim 20, in which the  
detector electrode, of which there is at least one, is of a shape which comprises  
at least one of
- at least one triangle;
  - at least one strip-surface combination; and/or
  - at least one electrode structure.
- 22.(Original) The measuring device according to claim 21, in which the at least one  
electrode structure comprises an electrode breakthrough or an electrode  
passivation layer.

23.(Original) The measuring device according to claim 21, in which the at least one electrode structure is formed by at least one detector electrode in whose surface a partial electrode is integrated.

24.(Currently Amended) The measuring device according to ~~any one of claims 21 to 23~~ claim 23, in which the partial electrode is of a characteristic size, which essentially is equal to or smaller than the size of the vertical projection of the particle onto the plane of the detector electrode with the partial electrode.

25.(Currently Amended) The measuring device according to ~~any one of claims 19 to 24~~ claim 14, in which the impedance detector comprises at least two detector electrodes which are arranged on at least one wall of the compartment, and extend across the width of the compartment across the direction of the fluid flow.

26.(Currently Amended) The measuring device according to claim 25, in which the detector electrodes comprise straight electrode strips which are arranged one on top of the other, parallel to the direction of the fluid flow, on the walls of the compartment, wherein the electrode strips comprise different widths, ~~and/or~~ structured edges, or both which are arranged so as to be offset across the direction of the fluid flow.

27.(Currently Amended) The measuring device according to ~~anyone of claims 14 to 26~~

claim 14, in which at least one further impedance detector, arranged so as to be spaced apart in the direction of the fluid flow, is provided.

28.(Currently Amended) The measuring device according to ~~any one of claims 14 to 27~~

claim 14, in which the at least one impedance detector comprises a frequency filter, by means of which frequencies at which the focusing device is operated can be filtered.

29.(New) A method for measuring the impedance in a fluidic microsystem comprising a compartment in which at least one impedance detector is arranged, the method comprising the steps of:

- flowing a fluid comprising at least one suspended particle through the compartment,
- focusing the particle to a predetermined space relative to the impedance detector, wherein said focusing involves a movement of the particle relative to the fluid as a result of dielectrophoretic forces being exerted by means of at least two focusing electrodes, and
- measuring at least one impedance value which is characteristic for the impedance of the compartment and which in the presence of the particle changes in a predetermined way.